USDA FOREST SERVICE
RESOURCE BULLETIN NC-14
1972

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Veneer-Log Production and Receipts

NORTH CENTRAL REGION
1970

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NORTH CENTRAL FOREST EXPERIMENT STATION
FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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VENEER-LOG PRODUCTION AND RECEIPTS, NORTH CENTRAL REGION, 1970

Thomas P. Ginnaty, Jr.

This report of 1970 veneer-log production[1] and receipts in the north central region is divided into two sections—Lake States (Minnesota, Wisconsin, and Michigan) and Central States (Indiana, Illinois, Iowa and Missouri) – because different species are grown and used as veneer logs in each area. In the Lake States, hard maple, elm, basswood, red oak, and yellow birch dominate; in the Central States, the hickories, oaks, and black walnut are more common.

Cooperation from the 43 standard[2] and 22 container[3] veneer mills in the region made this report possible (fig. 1). All but two mills reported their 1970 receipts by species and State of origin. Receipts were estimated for the nonresponding mills. Two mills are not included in this report to avoid disclosure of their operations (table 1). One of these mills is new and the other has never been included in previous reports. Export data are not reported except those to Canada.

Six container mills have closed since the 1968 veneer log production and receipts report.[4] Two other container mills shifted to standard veneer products. Two standard veneer mills have closed since 1968. Curtailing of mill operations in 1970 was common.

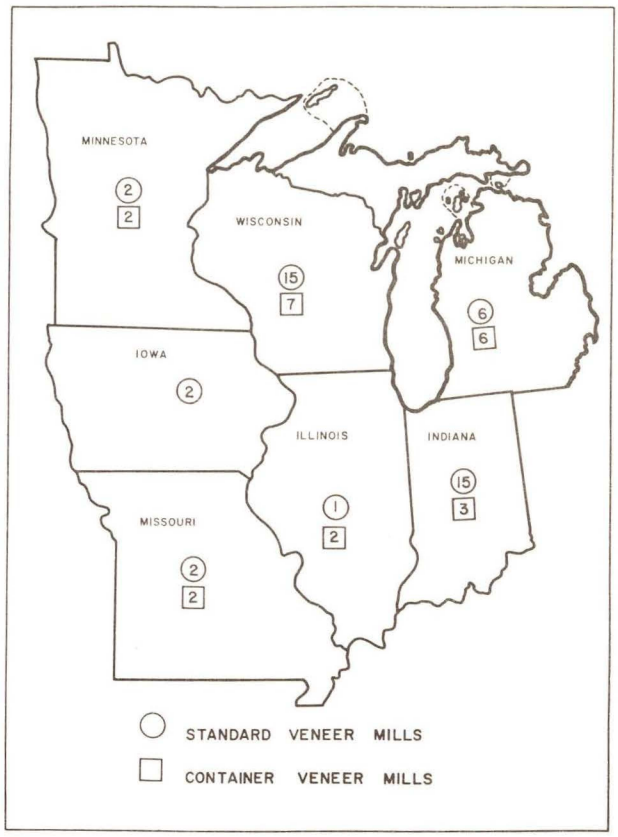

Figure 1.—Distribution of active veneer mills in the North Central States by State and type of mill, 1970.

LAKE STATES

Total veneer-log production declined between 1948 and 1958, and then leveled off for a few years until 1965. Since 1965 the trend has again been downward (fig. 2). The first decline probably can be attributed to substitute materials

[1] *Production is the volume of veneer logs cut from a specific area; receipts are the volume of veneer logs received by mills in a specific area regardless of geographic source.*

[2] *Commercial, face, and specialty veneer mills that manufacture veneer used in doorskins, furniture, wall panels, specialty plywood, and similar items.*

[3] *Mills that manufacture veneers used in boxes, baskets, crates, packing cases and other wood-veneer containers.*

[4] *Thomas P. Ginnaty, Jr. Veneer-log production and receipts, north central region, 1968. USDA Forest Serv. Resource Bull. NC-10, 8 p., illus. N. Cent. Forest Exp. Sta., St. Paul, Minn. 1970.*

Table 1.—Active veneer mills in the North Central States by state and type of mill, 1970

Type of mill	Name of mill	Location
	MINNESOTA	
Standard	Diamond National Co.[1/]	Cloquet
	Wahkon Veneer Mills	Wahkon
Container	Bren Berry Box Mfg. Co.	Hopkins
	Elk River Box Co.	Elk River
	WISCONSIN	
Standard	Birchwood Lumber & Veneer Co.	Birchwood
	Birchwood Mfg. Co.	Rice Lake
	Calumet & Hecla, Inc.	Goodman
	Calumet & Hecla, Inc.	Mellen
	Eggers Plywood Co.	Two Rivers
	General Plywood Corp.	Antigo
	Gillette Veneer & Plywood Co.	Gillett
	Hatley Veneer Co., Inc.	Hatley
	Larson Plywood Co., Inc.	Sheboygan
	Linwood, Inc.	Gillett
	Marion Plywood Corp.	Marion
	U.S. Plywood Corp.	Algoma
	Weber Veneer & Plywood Co.	Showano
	Weyerhaeuser Co.	Marshfield
	Wisconsin Timber & Land Co.	Mattoon
Container	Brunette Box & Veneer Co.	Rice Lake
	Dufeck Mfg. Co.	Denmark
	Ebner Box Factory	Cameron
	Konz Container Co.	Howard Grove
	Seymour Woodenware Co.	Seymour
	Standard Container Co.	Edgar
	Wauzeka Box Co.	Wauzeka
	MICHIGAN	
Standard	Anthony & Co.	Escanaba
	Birdseye Veneer & Plywood Co.	Escanaba
	Iron Wood Products[1/]	Bessemer
	Manthei Bros.	Petoskey
	Plycoma Veneer Co.	Nashville
	Soo Veneer Co.	Sault Ste. Marie
Container	A. C. Hensel Mfg. Co.	Augusta
	American Made Veneer	Kalkaska
	Nelson R. Anderson Co.	Stevensville
	Fruit Growers Package Co.	Paw Paw
	Michigan Crate & Basket	Shelby
	Riverside Package Co.	Riverside
	IOWA	
Standard	R. S. Bacon Veneer Co.	Dubuque
	Spencer Hardwood Lumber Co.	Spencer
	MISSOURI	
Standard	Enterprise Veneer Corp.	Pleasant Hill
	Missouri Valley Walnut Co.	St. Joseph
Container	Betz Tipton Veneer Co.	Caruthersville
	Crumbliss Wood Products	Neosho
	ILLINOIS	
Standard	Swords Veneer & Lumber Co.	Rock Island
Container	Cobden Box & Basket Co.	Cobden
	Main Brothers Box & Lbr. Co.	Karnak
	INDIANA	
Standard	Amos-Thompson Corp.	Edinburg
	B. L. Curry & Sons	New Albany
	Central Veneer, Inc.	Indianapolis
	Chester B. Stem, Inc.	New Albany
	Curry Miller Veneers, Inc.	Indianapolis
	David R. Webb, Co.	Edinburg
	Evansville Veneer Co.	Evansville
	Hill Bros. Veneer Co., Inc.	Edinburg
	Hoosier Veneer Co., Inc.	Indianapolis
	Jasper Veneer Mills	Jasper
	Mitchell Industries	Greensburg
	National Veneer & Lumber Co.	Seymour
	Pierson-Holowell Co., Inc.	Lawrenceburg
	Roberts & Strack Veneer Co.	Clarksville
	Theising Veneer Co., Inc.	Mooresville
Container	Farrel Box Co., Inc.	Decker
	New Albany Box & Basket Co., Inc.	New Albany
	W. C. Redmon Sons, Inc.	Peru

1/ Receipts not recorded to avoid disclosure of operations of this mill.

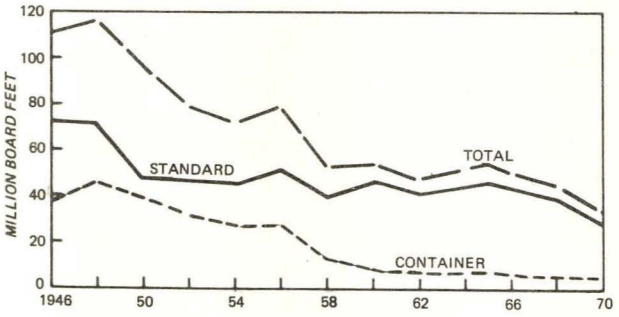

Figure 2.—Veneer-log production by year and type of industry, Lake States, 1946-1970.

capturing the traditional markets of the container veneer industry. Container veneer-log production leveled off in 1960 and remained stable through 1970, possibly because the mills are near the raw material source and suitable markets. This stabilization, coupled with a relatively steady standard veneer-log production, caused a firming of total veneer-log production between 1958 and 1965. A downward trend began in 1966, largely due to a reduction in thickness of veneer cut. This decline continued until by 1970 standard and total veneer-log production had decreased by a third as compared with 1965 production. The reasons for the decline most mentioned by the mill operators were the introduction of the print process[5] and increased foreign competition.

Comparison of veneer-log production and receipts figures from 1946 to 1970 shows that the Lake States veneer industry is depending less on outside log sources and procures most of its logs within the three Lake States.

Production

Loggers harvested 34.4 million board feet[6] of veneer logs in 1970, only 75 percent of the 1968

[5] *A manufacturing process that "prints" simulated natural wood finish on plastic, vinyl, hardboard, or nonfigured plywood panels.*

[6] *International ¼-inch log rule.*

production. Most of the volume (29.4 million board feet) was cut for manufacture into standard veneer. Hard maple, red oak, and yellow birch were the principal species. The remainder, largely cottonwood and elm, were logged for manufacturing container veneer[7] (table 2).

Table 2.—Container veneer-log and bolt production and receipts by species and State, Lake States, 1970

(Thousand board feet, International ¼-inch rule)

Species and destination	Production			Mill Receipts
	Minnesota	Wisconsin	Michigan	
Cottonwood:				
Minnesota	(1/)	--	--	(1/)
Wisconsin	315	101	--	416
Michigan	--	--	499	499
Total	315	101	499	915
Elm:				
Minnesota	(1/)	--	--	(1/)
Wisconsin	525	1,300	--	1,825
Michigan	--	--	602	602
Total	525	1,300	602	2,427
Other hardwoods:				
Minnesota	(1/)	--	--	(1/)
Wisconsin	31	256	--	287
Michigan	--	--	1,156	1,156
Total	31	256	1,156	1,443
All species:				
Minnesota	(1/)	--	--	(1/)
Wisconsin	871	1,657	--	2,528
Michigan	--	--	2,257	2,257
Total	871	1,657	2,257	4,785

1/ Not included to avoid disclosure of individual mill operations.

Wisconsin produced 15.8 million board feet of veneer logs in 1970, a 25 percent decrease since 1968 (table 3). Red oak and hard maple accounted for 33 and 20 percent, respectively, of the total production. Wisconsin mills consumed more than 90 percent of the volume produced within the State and three-fourths of the total volume produced in the Lake States.

Michigan harvested 15.0 million board feet of veneer logs. Hard maple and yellow birch (36 and 25 percent of the total) were the predominant species. Michigan exported about two-thirds of the volume produced, 49 percent of the total production going to Wisconsin mills.

Minnesota harvested 3.5 million board feet, one-tenth of the Lake States total. Eighty-four percent of the Minnesota production was exported to Wisconsin. The major species produced were elm, cottonwood, basswood, and red oak.

The Lake States exported 3.0 million board feet of veneer logs in 1970 (52 percent less than in 1968). Indiana mills received two-thirds of this volume. Michigan supplied three-fourths of the total volume exported. The major species exported was hard maple.

Mill Receipts

Lake States mills received 37.0 million board feet of veneer logs in 1970, a decline of 10.6 million board feet since 1968 and 18.4 million board feet since 1966.

Hard maple log receipts showed only a slight increase since 1968 due to the end-use versatility of this species (fig. 3). Yellow birch purchases fell significantly, reflecting competition from imports and a decline in the use of this wood in cabinetmaking. Lower receipts of red oak, used mainly for paneling and doors, reflected a drop in these markets. Elm showed a substantial overall loss in 1970 due to the slackening demand by standard veneer mills for this species, although there was an increase in its use in the container industry. Elm supplies in the woods have been much reduced by disease in recent years.

Wisconsin received 30.0 million board feet of veneer logs in 1970, down from 37.6 million board feet in 1968. More than half the volume was hard maple and red oak. More than 50 percent of the logs came from within the State; Michigan supplied 7.3 million board feet (mainly hard maple and yellow birch), and Minnesota supplied 3.0 million board feet (mainly elm, red oak, and cottonwoods). Fifteen percent of the wood used in Wisconsin was imported from outside the Lake States, three-fifths of which came from Canada (mainly hard maple and yellow birch).

[7] *An additional 1,645 cords of heading stock were cut for the container mills.*

Table 3.—Production and imports of veneer logs, Lake States, 1970

(Thousand board feet, International ¼-inch rule)

Species and Destination	Production (Volume of veneer logs cut in each State)				Imports			Lake States receipts[1/]
	Minnesota	Wisconsin	Michigan	Region total	Other States	Canada	Total imports	
Aspen								
Minnesota	17	--	--	17	--	--	--	17
Wisconsin	19	1,155	2	1,176	--	--	--	1,176
Michigan	--	--	79	79	--	--	--	79
Outside Lake States	--	--	--	--	--	--	--	--
Total	36	1,155	81	1,272	--	--	--	1,272
Ash								
Minnesota	17	--	--	17	--	--	--	17
Wisconsin	21	164	15	200	10	--	10	210
Michigan	--	--	127	127	--	--	--	127
Outside Lake States	--	--	6	6	--	--	--	--
Total	38	164	148	350	10	--	10	354
Basswood								
Minnesota	93	--	--	93	--	--	--	93
Wisconsin	443	2,026	224	2,693	322	--	322	3,015
Michigan	--	--	462	462	--	--	--	462
Outside Lake States	--	--	20	20	--	--	--	--
Total	536	2,026	706	3,268	322	--	322	3,570
Beech								
Wisconsin	--	6	23	29	--	--	--	29
Michigan	--	--	264	264	--	--	--	264
Total	--	6	287	293	--	--	--	293
White birch								
Minnesota	13	--	--	13	--	--	--	13
Wisconsin	145	159	137	441	7	398	405	846
Michigan	77	--	630	707	--	361	361	1,068
Outside Lake States	--	--	--	--	--	--	--	--
Total	235	159	767	1,161	7	759	766	1,927
Yellow birch								
Wisconsin	131	536	2,351	3,018	--	1,133	1,133	4,151
Michigan	--	26	1,386	1,412	--	567	567	1,979
Outside Lake States	--	--	36	36	--	--	--	--
Total	131	562	3,773	4,466	--	1,700	1,700	6,130
Butternut								
Wisconsin	--	3	--	3	--	--	--	3
Michigan	--	3	2	5	--	--	--	5
Outside Lake States	44	277	--	321	--	--	--	--
Total	44	283	2	329	--	--	--	8
Black cherry								
Wisconsin	2	28	6	36	1	--	1	37
Michigan	--	--	31	31	--	--	--	31
Outside Lake States	--	5	29	34	--	--	--	--
Total	2	33	66	101	1	--	1	68
Cottonwood								
Minnesota	85	--	--	85	--	--	--	85
Wisconsin	591	126	--	717	97	--	97	814
Michigan	--	--	499	499	--	--	--	499
Outside Lake States	--	--	--	--	--	--	--	--
Total	676	126	499	1,301	97	--	97	1,398

(Continued on next page)

Table 3 continued

Species and Destination	Production (Volume of veneer logs cut in each State)				Imports			Lake States receipts 1/
	Minnesota	Wisconsin	Michigan	Region total	Other States	Canada	Total imports	
Elm								
Minnesota	40	--	--	40	--	--	--	40
Wisconsin	893	1,880	126	2,899	46	--	46	2,945
Michigan	--	30	772	802	33	--	33	835
Outside Lake States	34	--	--	34	--	--	--	--
Total	967	1,910	898	3,775	79	--	79	3,820
Hickory								
Michigan	--	--	6	6	148	--	148	154
Outside Lake States	--	--	15	15	--	--	--	--
Total	--	--	21	21	148	--	148	154
Sugar and black maple								
Minnesota	43	11	11	65	--	--	--	65
Wisconsin	120	3,195	3,576	6,891	287	1,040	1,327	8,218
Michigan	--	--	724	724	--	--	--	724
Outside Lake States	25	--	1,077	1,102	--	--	--	--
Total	188	3,206	5,388	8,782	287	1,040	1,327	9,007
Red and silver maple								
Minnesota	27	--	--	27	32	--	32	59
Wisconsin	71	506	119	696	52	--	52	748
Michigan	--	--	104	104	--	--	--	104
Outside Lake States	--	--	--	--	--	--	--	--
Total	98	506	223	827	84	--	84	911
Red oak								
Minnesota	1	--	--	1	--	--	--	1
Wisconsin	501	5,214	766	6,481	924	132	1,056	7,537
Michigan	--	11	76	87	25	--	25	112
Outside Lake States	--	11	250	261	--	--	--	--
Total	502	5,236	1,092	6,830	949	132	1,081	7,650
White oak								
Wisconsin	5	134	--	139	--	--	--	139
Michigan	--	9	34	43	15	--	15	58
Outside Lake States	--	--	108	108	--	--	--	--
Total	5	143	142	290	15	--	15	197
Walnut								
Michigan	--	--	--	--	--	--	--	--
Outside Lake States	31	283	245	559	--	--	--	--
Total	31	283	245	559	--	--	--	--
Misc. species								
Wisconsin	9	16	2	27	1	--	1	28
Michigan	--	--	203	203	25	--	25	228
Outside Lake States	--	--	496	496	--	--	--	--
Total	9	16	701	726	26	--	26	256
All species								
Minnesota	336	11	11	358	32	--	32	390
Wisconsin	2,951	15,148	7,347	25,446	1,747	2,703	4,450	29,896
Michigan	77	79	5,399	5,555	246	928	1,174	6,729
Outside Lake States	134	576	2,282	2,992	--	--	--	--
Total	3,498	15,814	15,039	34,351	2,025	3,631	5,656	37,015

1/ Production minus exports plus imports.

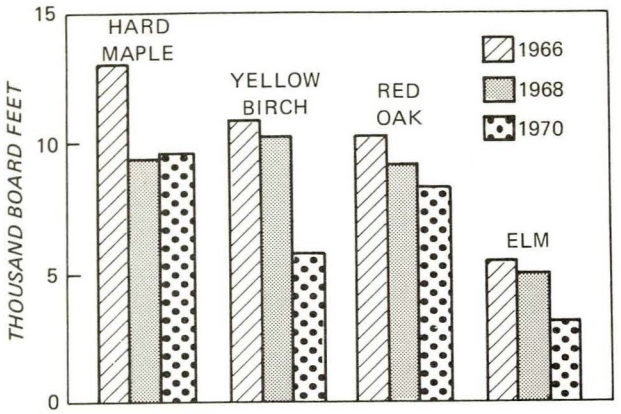

Figure 3.—Veneer-log receipts in Lake States by major species.

Michigan received 6.7 million board feet of veneer logs, of which 80 percent came from within the State. Yellow birch and paper birch were the predominant species.

Table 4.—Disposition of primary plant residue by type and by volume of mill receipts, Lake States, 1970

(In percent)

Use	Residue		
	Bark	Veneer cores	Veneer clipping
Manufacture of pulp, hardboard, or roofing felt:	--	19	9
Industrial fuel:	87	60	77
Domestic fuel:	(1/)	1	--
Small dimension or specialty items:	--	16	(1/)
Not used:	13	4	14
Total	100	100	100

1/ Less than 0.5 percent

Minnesota's mills procured 0.4 million board feet of veneer logs. One Minnesota mill changed from producing container veneer to standard veneer (table 1).

Mill Residues

The residues of veneer mills in the Lake States, such as bark, veneer cores, and veneer clippings, were largely used as commercial or domestic fuels. However, 38 percent of the volume of veneer cores was used in the manufacture of fiber products such as pulp, hardboard, and roofing felt (table 4).

CENTRAL STATES

Production

Veneer-log production dropped to 23.5 million board feet in 1970 from 37.0 million board feet in 1968 (table 5). Although this 36 percent reduction was not uniform in each State, production in every State declined, Iowa and Missouri were affected most, possibly because of the relatively long distance to receiving mills. During slack market periods, veneer mills tend to purchase their logs nearer the mill.

Walnut and cottonwood accounted for 35 and 20 percent of the 1970 veneer-log production, respectively. Walnut, hickory, white and red oak harvests all showed a sharp drop from 1968, probably due to the increasing popularity of synthetic prints, changing furniture styles, and foreign competition. Cottonwood, sycamore, and soft maple were the species used primarily by the container veneer industry (table 6).

Mill Receipts

Mill receipts in the Central States were 28.0 million board feet in 1970, a 43 percent reduction from 1968 (fig. 4). All major species were affected. The mill operators cited foreign competition and increased use of plastic and vinyl prints in the production of panels and furniture as the reasons for this reduction.

Mill Residues

Veneer mill residues were used largely for industrial fuel (table 7). Nine percent of the fine residues (veneer clippings) and 19 percent of the course residues (veneer cores) were used in manufacture of fiber products. Sixteen percent of the veneer cores were used in small dimension or specialty items.

Table 5.–Production and imports of veneer logs, Central States, 1970

(Thousand board feet, International ¼-inch rule)

Species	Destination	Production					Imports			Central States receipts[1/]
		Indiana	Illinois	Iowa	Missouri	Region total	Other States	Canada	Total imports	
Ash	Indiana	174	6	--	--	180	151	--	151	331
	Other Central States[2/]	--	--	75	22	97	6	--	6	103
	Outside Central States	3	--	10	6	19	--	--	--	--
	Total	177	6	85	28	296	157	--	157	434
Basswood	Indiana	--	--	--	--	--	20	--	20	20
	Other Central States[2/]	--	--	5	--	5	--	--	--	5
	Outside Central States	--	21	296	--	317	--	--	--	--
	Total	--	21	301	--	322	20	--	20	25
Black cherry	Indiana	57	--	--	--	57	132	--	132	189
	Other Central States[2/]	--	--	1	--	1	--	--	--	1
	Outside Central States	19	--	1	--	20	--	--	--	--
	Total	76	--	2	--	78	132	--	132	190
Butternut	Indiana	7	3	66	3	79	324	--	324	403
	Other Central States[2/]	--	--	49	--	49	--	--	--	49
	Outside Central States	--	--	--	--	--	--	--	--	--
	Total	7	3	115	3	128	324	--	324	452
Cottonwood	Indiana	1,118	--	--	--	1,118	104	--	104	1,222
	Other Central States[2/]	122	1,684	--	705	2,511	1,016	--	1,016	3,527
	Outside Central States	--	--	1,121	--	1,121	--	--	--	--
	Total	1,240	1,684	1,121	705	4,750	1,120	--	1,120	4,749
Elm	Indiana	51	--	--	--	51	5	--	5	56
	Other Central States[2/]	--	--	398	22	420	--	--	--	420
	Outside Central States	--	--	85	--	85	--	--	--	--
	Total	51	--	483	22	556	5	--	5	476
Gum	Indiana	458	43	--	--	501	117	--	117	618
	Other Central States[2/]	8	121	--	37	166	47	--	47	213
	Outside Central States	--	--	--	2	2	--	--	--	--
	Total	466	164	--	39	669	164	--	164	831
Hickory	Indiana	139	115	--	33	287	1,622	--	1,622	1,909
	Other Central States[2/]	--	103	361	468	932	153	--	153	1,085
	Outside Central States	149	20	--	128	297	--	--	--	--
	Total	288	238	361	629	1,516	1,775	--	1,775	2,994
Sugar and black maple	Indiana	309	18	--	--	327	938	66	1,004	1,331
	Other Central States[2/]	--	--	--	--	--	--	--	--	--
	Outside Central States	174	3	292	--	469	--	--	--	--
	Total	483	21	292	--	796	938	66	1,004	1,331
Red and silver maple	Indiana	130	--	--	--	130	11	--	11	141
	Other Central States[2/]	22	180	13	116	331	140	--	140	471
	Outside Central States	--	--	84	5	89	--	--	--	--
	Total	152	180	97	121	550	151	--	151	612
Red oak	Indiana	92	13	--	--	105	257	--	257	362
	Other Central States[2/]	7	53	333	39	432	47	--	47	479
	Outside Central States	25	120	597	--	742	--	--	--	--
	Total	124	186	930	39	1,279	304	--	304	841
White oak	Indiana	1,206	172	--	19	1,397	567	--	567	1,964
	Other Central States[2/]	--	--	--	1	1	--	--	--	1
	Outside Central States	255	--	--	10	265	--	--	--	--
	Total	1,461	172	--	30	1,663	567	--	567	1,965
Sycamore	Indiana	1,049	--	--	--	1,049	52	--	52	1,101
	Other Central States[2/]	7	142	--	62	211	50	--	50	261
	Outside Central States	--	--	--	42	42	--	--	--	--
	Total	1,056	142	--	104	1,302	102	--	102	1,362
Yellow poplar	Indiana	780	--	--	--	780	249	--	249	1,029
	Other Central States[2/]	--	22	--	4	26	--	--	--	26
	Outside Central States	--	--	1	42	43	--	--	--	--
	Total	780	22	1	46	849	249	--	249	1,055
Walnut	Indiana	3,762	1,543	380	713	6,398	1,912	--	1,912	8,310
	Other Central States[2/]	--	299	405	499	1,203	465	--	465	1,668
	Outside Central States	532	--	--	6	538	--	--	--	--
	Total	4,294	1,842	785	1,218	8,139	2,377	--	2,377	9,978
Misc. species	Indiana	609	--	--	--	609	24	--	24	633
	Other Central States[2/]	--	--	14	--	14	14	--	14	28
	Outside Central States	--	--	7	11	18	--	--	--	--
	Total	609	--	21	11	641	38	--	38	661
All species	Indiana	9,941	1,913	446	768	13,068	6,485	66	6,551	19,619
	Other Central States[2/]	166	2,604	1,654	1,975	6,399	1,938	--	1,938	8,337
	Outside Central States	1,157	164	2,494	252	4,067	--	--	--	--
	Total	11,264	4,681	4,594	2,995	23,534	8,423	66	8,489	27,956

1/ Production minus exports plus imports
2/ Illinois, Iowa and Missouri

Table 6.—Production and imports of container veneer logs, Central States, 1970

(Thousand board feet, International ¼-inch rule)

Species and destination	Production					Imports			Central States receipts[1]
	Indiana	Illinois	Iowa	Missouri	Region total	Other states	Canada	Total	
Cottonwood:									
Indiana	1,042	--	--	--	1,042	104	--	104	1,146
Other Central States[2]	122	1,684	--	705	2,511	1,016	--	1,016	3,527
Outside Central States	--	--	1,035	--	1,035	--	--	--	--
Total	1,164	1,684	1,035	705	4,588	1,120	--	1,120	4,673
Red and silver maple:									
Indiana	31	--	--	--	31	11	--	11	42
Other Central States[2]	22	180	--	116	318	140	--	140	458
Outside Central States	--	--	--	--	--	--	--	--	--
Total	53	180	--	116	349	151	--	151	500
Sycamore:									
Indiana	907	--	--	--	907	52	--	52	959
Other Central States[2]	7	142	--	62	211	48	--	48	259
Outside Central States	--	--	--	--	--	--	--	--	--
Total	914	142	--	62	1,118	100	--	100	1,218
Other hardwoods:									
Indiana	244	--	--	--	244	41	--	41	285
Other Central States[2]	15	196	--	124	335	100	--	100	435
Outside Central States	--	--	--	--	--	--	--	--	--
Total	259	196	--	124	579	141	--	141	720
All species:									
Indiana	2,224	--	--	--	2,224	208	--	208	2,432
Other Central States[2]	166	2,202	--	1,007	3,375	1,304	--	1,304	4,679
Outside Central States	--	--	1,035	--	1,035	--	--	--	--
Total	2,390	2,202	1,035	1,007	6,634	1,512	--	1,512	7,111

1/ Production minus exports plus imports
2/ Illinois, Iowa and Missouri

Figure 4.—Veneer-log production and mill receipts in Central States, 1956-1970.

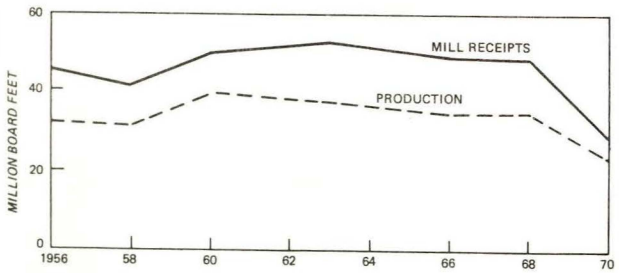

Table 7.—Disposition of primary plant residue by type and use, Central States, 1970

(In percent)

Use	Residue		
	Bark	Veneer cores	Veneer clipping
Manufacture of pulp, hardboard, or roofing felt:	--	38	5
Charcoal or chemical wood:	--	(1/)	--
Industrial fuel:	88	32	91
Domestic fuel:	--	23	--
Small dimension or specialty items:	--	4	(1/)
Not used:	12	3	4
Total	100	100	100

1/ Less than 0.5 percent

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RECENT REPORTS ON VENEER-LOG PRODUCTION PUBLISHED BY NORTH CENTRAL FOREST EXPERIMENT STATION

Lake States Veneer Log Production Shows Increase in 1965, by Robert G. Knutson, USDA Forest Serv. Res. Note NC-26, 3 p., illus. 1967.

Veneer-Log Production and Consumption, North Central Region, 1966, by James E. Blyth. USDA Forest Serv. Resource Bull. NC-5, 6 p., 1968.

Veneer-Log Production and Receipts, North Central Region, 1968, by Thomas P. Ginnaty, Jr., USDA Forest Serv. Resource Bull. NC-10, 8 p., illus., 1970.

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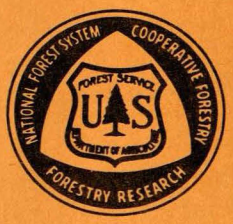

- Conducting forest and range research at over 75 locations ranging from Puerto Rico to Alaska to Hawaii.
- Participating with all State forestry agencies in cooperative programs to protect, improve, and wisely use our Country's 395 million acres of State, local, and private forest lands.
- Managing and protecting the 187-million acre National Forest System.

The Forest Service does this by encouraging use of the new knowledge that research scientists develop; by setting an example in managing, under sustained yield, the National Forests and Grasslands for multiple use purposes; and by cooperating with all States and with private citizens in their efforts to achieve better management, protection, and use of forest resources.

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For more than 60 years, the Forest Service has been serving the Nation as a leading natural resource conservation agency.